

Appl. No.: 10/771,492

Response to Office communication dated: 10/13/05

Attorney Docket: CW/161/US

AMENDMENT TO THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A descent controller, comprising:

a housing means for providing a nonlinear rope path extending from one longitudinal end of the housing to the other end, the housing ~~means~~ having an exterior surface ~~forming~~ substantially enclosing a longitudinal capstan portion and the housing ~~means~~ defining a longitudinal counterbore therein;

a plunger means disposed within the counterbore for movement between a rope releasing position and a rope gripping position, the plunger ~~means~~ comprising a transverse through aperture means for selectively narrowing the rope path; and

a biasing member means substantially disposed within the counterbore for biasing the plunger ~~means~~ toward the rope gripping position.

2. (Currently Amended) The descent controller of claim 1 wherein comprising means ~~the housing for~~ substantially encloses ~~enclosing the housing means,~~ the plunger means and the spring mechanism ~~biasing means~~.

3. (Original) The descent controller of claim 1, wherein the nonlinear rope path encircles the capstan portion.

4. (Currently Amended) The descent controller of claim 1, wherein the transverse through aperture means for selectively narrowing the rope path is within ~~defined by~~ a bottom portion of the plunger ~~means~~.

5. (Currently Amended) The descent controller of claim 1 wherein the housing ~~means~~ and the plunger ~~means~~ define a ~~smoothly flowing~~ rope path having inner radii of more than 1.2 times the rope radius, external radii of more than 3 times the rope radius and having substantially no high spots or ledges.

6. (Currently Amended) The descent controller of claim 1, wherein the housing means includes a lower end portion defining a transverse aperture and the nonlinear rope path proceeds through the transverse aperture and encircles the capstan portion.

7. (Currently Amended) The descent controller of claim 1, wherein the housing is comprising means for substantially enclosed enclosing the housing means and wherein the enclosing means, the housing means and the plunger means all have a fixed rotational orientation.

8. (Currently Amended) The descent controller of claim 1, wherein ~~comprising means for substantially enclosing the housing means and wherein the enclosing means~~, the housing means and the plunger means are each concentric.

9. (Original) A controller for selectively gripping and releasing a rope, comprising:
a housing having a longitudinal capstan portion and defining a longitudinal counterbore therein;
a plunger including a bottom portion disposed within the counterbore for movement between a first position wherein the rope is gripped and a second position wherein the rope is released; and
a biasing member disposed within the counterbore for urging the plunger toward the first position.

10. (Currently Amended) ~~The controller of claim 9,~~ A controller for selectively gripping and releasing a rope, comprising:
a housing having a longitudinal capstan portion and defining a longitudinal counterbore therein wherein the housing includes a lower end portion defining a transverse aperture therein, the transverse aperture intersecting the longitudinal counterbore;
a plunger including a bottom portion disposed within the counterbore for movement

between a first position wherein the rope is gripped and a second position wherein the rope is released; and

a biasing member disposed within the counterbore for urging the plunger toward the first position.

11. (Original) The controller of claim 9, wherein the plunger bottom portion defines a downwardly narrowing tapered slot extending diametrically therethrough.

12. (Original) The controller of claim 9, wherein the plunger defines a thrust shoulder, the housing defines a thrust shoulder and the biasing member contacts both the plunger thrust shoulder and the housing thrust shoulder.

13. (Original) The controller of claim 9, wherein the housing includes means for attaching a load or a mounting support.

14. (Currently Amended) ~~The controller of claim 9,~~ A controller for selectively gripping and releasing a rope, comprising:

a housing having a longitudinal capstan portion and defining a longitudinal counterbore therein;

a plunger including a bottom portion disposed within the counterbore for movement between a first position wherein the rope is gripped and a second position wherein the rope is released wherein the plunger bottom portion defines a downwardly narrowing tapered slot extending diametrically therethrough, the housing includes a lower end portion defining a transverse aperture connecting to a generally longitudinal aperture, the transverse aperture intersecting the longitudinal counterbore, the controller defining a rope path through the transverse aperture, the tapered slot, the generally longitudinal aperture and encircling the capstan portion; and

a biasing member disposed within the counterbore for urging the plunger toward the first position.

15. (Original) The controller of claim 9, wherein the housing includes a top plate and the plunger includes a top portion overlying the top plate.

16. (Currently Amended) ~~The controller of claim 9,~~ A controller for selectively gripping and releasing a rope, comprising:

a housing having a longitudinal capstan portion and defining a longitudinal counterbore therein, wherein the housing includes an external surface and defines a longitudinally elongated aperture extending between the external surface and the counterbore, the plunger defines a transverse aperture therethrough, and a pin is disposed in the elongated aperture and the transverse aperture, the pin and elongated aperture limiting movement of the plunger to axial motion within the range between the first and second positions;

a plunger including a bottom portion disposed within the counterbore for movement between a first position wherein the rope is gripped and a second position wherein the rope is released; and

a biasing member disposed within the counterbore for urging the plunger toward the first position.

17. (Original) The controller of claim 9, wherein the plunger includes a top portion having two radially spaced stops projecting therefrom, the housing includes a lower end portion defining an attachment point, and a strap is selectively connectable to the attachment point and placeable intermediate the stops to maintain the plunger between the first and second positions.

18. (Original) The controller of claim 9, wherein the housing includes a top plate defining a first aperture radially spaced from the counterbore and the plunger includes a top portion overlying the top plate, the top portion defining a second aperture angularly alignable with the first aperture.

19. (Original) A manually actuated controller for lowering a rope supported load from an elevated position to a relatively lower position, comprising:

a housing having a longitudinal axis and defining a counterbore concentric with the axis, the housing having a lower end portion defining a generally diametrical aperture intersecting the counterbore and a generally longitudinal aperture intersecting the diametrical aperture, an opposing top plate defining a radial slot therein and a cylindrically shaped intermediate portion disposed between the top plate and the lower end portion; a plunger having a bottom portion and an intermediate portion both disposed in the counterbore and a top portion overlying the top plate, the top portion defining a radial slot in angular alignment with the top plate slot, the plunger bottom portion defining a tapered slot extending diametrically therethrough, the slot tapering from an enlarged end to a narrowed end and at least a portion of the tapered slot in radial alignment with the diametrical aperture;

means for limiting the plunger movement within the counterbore;

a spring disposed within the counterbore and radially between the plunger bottom portion and the housing, the spring biasing the tapered slot narrowed end toward radial alignment with the diametrical aperture; and

a sleeve enclosing the spring, the limiting means, the plunger, the housing top plate and the housing intermediate portion and connected to the plunger for movement thereof;

wherein a rope path is defined through the diametrical aperture, the tapered slot, the generally longitudinal aperture, multiply encircling the housing intermediate portion and through the top plate radial slot and the top portion radial slot.

20. (Original) The controller of claim 19, wherein the counterbore comprises a smaller diameter in the housing bottom portion and a larger diameter in the housing intermediate portion and wherein the plunger bottom portion comprises a smaller diameter than the plunger intermediate portion.

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21. (New) A controller for selectively gripping and releasing a rope, comprising:
- a housing having a longitudinal capstan portion and defining a longitudinal counterbore therein;
 - a plunger including a bottom portion disposed within the counterbore for movement between a first position wherein the rope is gripped and a second position wherein the rope is released wherein the plunger is substantially enclosed within the housing; and
 - a biasing member disposed within the counterbore for urging the plunger toward the first position wherein the biasing member is substantially enclosed within the housing.